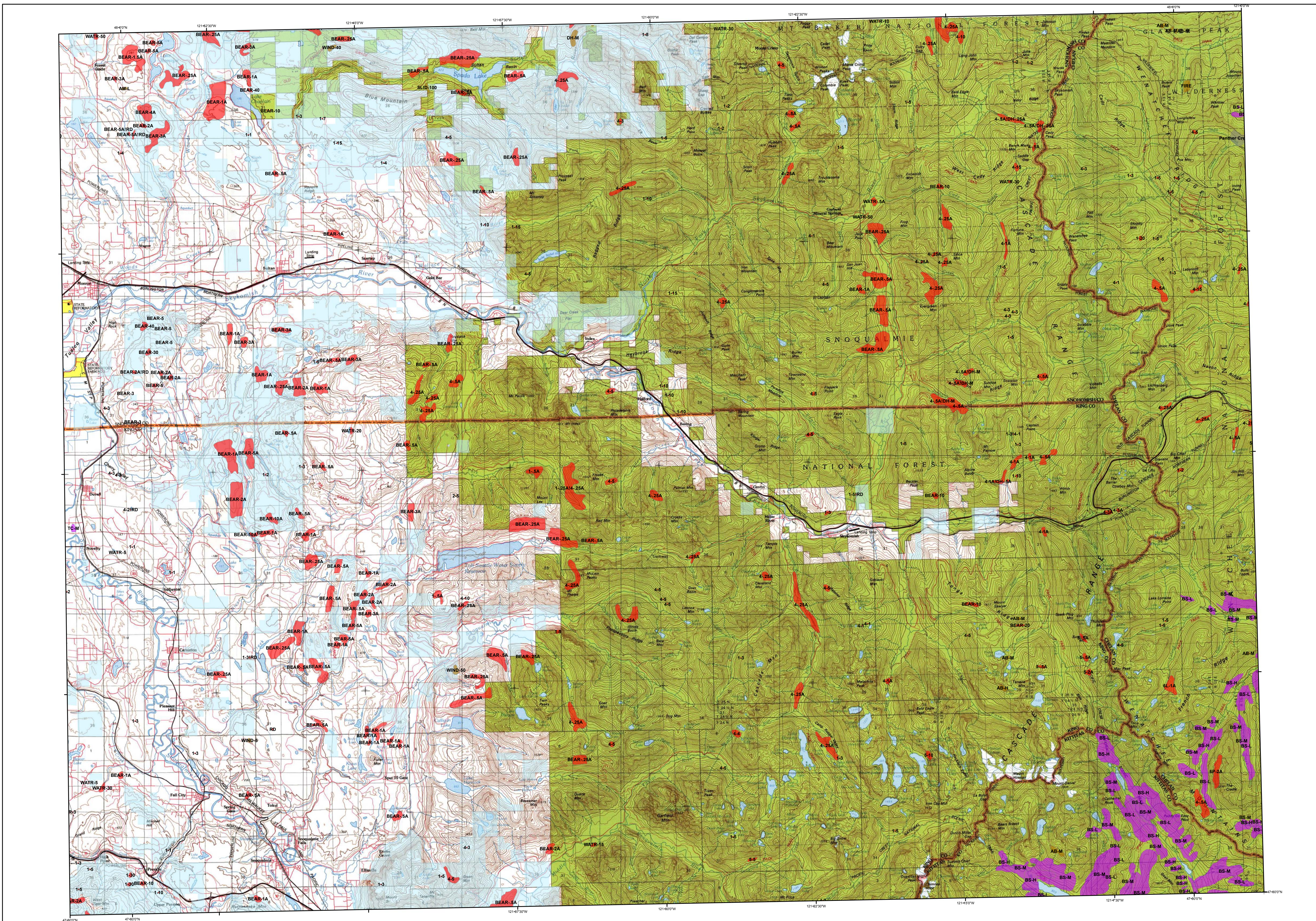


2007 Aerial Insect and Disease Survey

USGS 100K Quad: Skykomish River - E147121; 4C



Defoliators		
Code	Damaging Agent	Primary Host
AS	Spruce aphid	Sitka spruce
BB	Western blackheaded budworm	Hemlock, spruce, true fir
BM	Modoc budworm	White fir
BP	Sugar pine tortrix	Ponderosa pine
BS	Western spruce budworm	True fir, Douglas-fir, spruce
BY	Bynum's blight/ophidomyia	Ponderosa pine
CH	Larch	Western larch
HL	Western hemlock looper	Western hemlock looper
LG	Green striped forest looper	Douglas-fir, Western hemlock
LL	Larch looper	Western larch
LS	Black pine needle scale	Ponderosa pine
MD	Douglas-fir budmoth	Douglas-fir
ML	Larch budmoth	Douglas-fir
NL	Douglas-fir needle midge	Douglas-fir
MS	Spruce budmoth	Spruce
ND	Needle miner	Douglas-fir
NJ	Needle miner	Jeffrey pine
NK	Needle miner	Knapcone pine
NL	Needle miner	Lodgepole pine
NM	Needle miner	Pine
NP	Needle miner	Ponderosa pine
NS	Needle miner	Sugar pine
NW	Needle miner	True fir
NT	Needle miner	Western white pine
OL	Western oak looper	Oak
PB	Pine butterfly	Ponderosa pine
PC	Pine needle cast	Ponderosa pine
PH	Phantom hemlock looper	Hemlock, Douglas-fir
PM	Pandora moth	Hemlock, Jeffrey pine
PN	Pine needleshelter miner	Ponderosa, Jeffrey pines
PS	Pine needle scale	Pine
SA	Sawfly	Western larch
SD	Sawfly	Conifer
SE	Sawfly	Douglas-fir
SH	Sawfly	True fir
SL	Sawfly	Hemlock
SM	Sawfly	Knapcone pine
SN	Sawfly	Lodgepole pine
SP	Sawfly	Douglas-fir
SW	Sawfly	Ponderosa pine
TA	Tent caterpillar, alder	Alder
TC	Tent caterpillar, other	Hardwoods
TS	Tent caterpillar, aspen	True fir, Douglas-fir

Mortality Agents		
Code	Damaging Agent	Primary Host
1	Douglas-fir beetle	Douglas-fir
2	Douglas-fir engraver	Douglas-fir
3	Fire engraver	Spruce
4	Fire engraver	True fir
5	Western balsam bark beetle	Sub-alpine fir
6	Mountain pine beetle	Whitebark pine
6A	Mountain pine beetle	Jeffrey pine
6B	Mountain pine beetle	Knapcone pine
6C	Mountain pine beetle	Lodgepole pine
6D	Mountain pine beetle	Ponderosa pine
6E	Mountain pine beetle	Sugar pine
6F	Mountain pine beetle	Western white pine
6G	Mountain pine beetle	Ponderosa, lodgepole pines
6H	Mountain pine beetle	Pine
6I	Mountain pine beetle	Pine
6J	Mountain pine beetle	Pine
6K	Mountain pine beetle	Pine
6L	Mountain pine beetle	Pine
6M	Mountain pine beetle	Pine
6N	Mountain pine beetle	Pine
6O	Mountain pine beetle	Pine
6P	Mountain pine beetle	Pine
6Q	Mountain pine beetle	Pine
6R	Mountain pine beetle	Pine
6S	Mountain pine beetle	Pine
6T	Mountain pine beetle	Pine
6U	Mountain pine beetle	Pine
6V	Mountain pine beetle	Pine
6W	Mountain pine beetle	Pine
6X	Mountain pine beetle	Pine
6Y	Mountain pine beetle	Pine
6Z	Mountain pine beetle	Pine
7	True fir	True fir
8	Western pine beetle	Ponderosa pine
9	Ponderosa pine	Ponderosa pine
10	Western white pine	Western white pine
11	Pine	Pine
12	Pine	Pine
13	Pine	Pine
14	Pine	Pine
15	Pine	Pine
16	Pine	Pine
17	Pine	Pine
18	Pine	Pine
19	Pine	Pine
20	Pine	Pine
21	Pine	Pine
22	Pine	Pine
23	Pine	Pine
24	Pine	Pine
25	Pine	Pine
26	Pine	Pine
27	Pine	Pine
28	Pine	Pine
29	Pine	Pine
30	Pine	Pine
31	Pine	Pine
32	Pine	Pine
33	Pine	Pine
34	Pine	Pine
35	Pine	Pine
36	Pine	Pine
37	Pine	Pine
38	Pine	Pine
39	Pine	Pine
40	Pine	Pine
41	Pine	Pine
42	Pine	Pine
43	Pine	Pine
44	Pine	Pine
45	Pine	Pine
46	Pine	Pine
47	Pine	Pine
48	Pine	Pine
49	Pine	Pine
50	Pine	Pine
51	Pine	Pine
52	Pine	Pine
53	Pine	Pine
54	Pine	Pine
55	Pine	Pine
56	Pine	Pine
57	Pine	Pine
58	Pine	Pine
59	Pine	Pine
60	Pine	Pine
61	Pine	Pine
62	Pine	Pine
63	Pine	Pine
64	Pine	Pine
65	Pine	Pine
66	Pine	Pine
67	Pine	Pine
68	Pine	Pine
69	Pine	Pine
70	Pine	Pine
71	Pine	Pine
72	Pine	Pine
73	Pine	Pine
74	Pine	Pine
75	Pine	Pine
76	Pine	Pine
77	Pine	Pine
78	Pine	Pine
79	Pine	Pine
80	Pine	Pine
81	Pine	Pine
82	Pine	Pine
83	Pine	Pine
84	Pine	Pine
85	Pine	Pine
86	Pine	Pine
87	Pine	Pine
88	Pine	Pine
89	Pine	Pine
90	Pine	Pine
91	Pine	Pine
92	Pine	Pine
93	Pine	Pine
94	Pine	Pine
95	Pine	Pine
96	Pine	Pine
97	Pine	Pine
98	Pine	Pine
99	Pine	Pine
100	Pine	Pine

Legend

- Defoliating Agents
- Mortality Agents
- Other Damage
- Areas Not Flown

WaDNR Managed Lands

Source: Washington Dept. of Natural Resources

The map base was created with TOPO! (Copyright 2001, National Geographic), available online at: www.ngmapstore.com

A data dictionary, digital copies of this map and ArcGIS insect and disease data are available at: www.fs.fed.us/r6/nr/rid/data.shtml

How the Aerial Surveys are Conducted

Data represented on this map are based on trees visibly affected by forest insects and diseases detected and recorded during aerial survey flights conducted by the USDA Forest Service and the Washington Department of Natural Resources. Observers have just a few seconds to recognize the color difference between healthy and damaged trees of different species; diagnose causal agents correctly; estimate intensity; delineate the extent of damage; and precisely record this information on a georeferenced, digital map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke and observer experience can all affect the quality of the survey. These data summaries provide an estimate of conditions on the ground and may differ from estimates derived by other methods.

The aerial survey provides information on the current status for many causal agents, and is important when examining insect activity trends by comparing historical and current survey data over large areas.

Overview surveys are a 'snap shot' in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance activity. Specially designed surveys with modified flight patterns and timing may be conducted to more accurately delineate the extent and severity of a particular disturbance agent. Special surveys, such as Swiss needle cast surveys, are conducted when resources are available to address situations of sufficient economic, political or environmental importance.

DIRECT ALL INQUIRIES TO:

Washington State Department of
Natural Resources
Resource Protection
Forest Health
1111 Washington St. SE
Olympia, WA 98504

-- OR --

USDA Forest Service, Region 6
Natural Resources
Forest Health Protection
PO Box 3623
Portland, Oregon 97208

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Suberland - Commissioner of Public Lands

****DISCLAIMER****

The insect and disease data presented should only be used as an indicator of insect and disease activity, and should be ground-checked for precise location, extent, severity and causal agent.

Color coded polygons show locations where trees were recently killed or defoliated. Intensity of damage is variable and not all trees within coded polygons are dead or defoliated.

The cooperators reserve the right to correct, update, modify or replace GIS products without notice. Using this map for purposes other than those for which it was intended may yield inaccurate or misleading results.